



ENTERED

PCT09

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/701,014

DATE: 03/05/2002

TIME: 14:12:21

Input Set : A:\sequence list.txt

Output Set: N:\CRF3\03052002\I701014.raw

3 <110> APPLICANT: Mitraphanous, Kyrlacos
 4 Patil, Deva
 5 Kingsman, Alan
 6 Kingsman, Susan
 7 Ellard, Fiona
 9 <120> TITLE OF INVENTION: Retroviral Delivery System
 11 <130> FILE REFERENCE: 550-184
 13 <140> CURRENT APPLICATION NUMBER: 09/701,014
 14 <141> CURRENT FILING DATE: 2001-05-24
 16 <150> PRIOR APPLICATION NUMBER: PCT/GB99/01607
 17 <151> PRIOR FILING DATE: 1999-05-21
 19 <150> PRIOR APPLICATION NUMBER: GB 9811153.7
 20 <151> PRIOR FILING DATE: 1998-07-17
 22 <160> NUMBER OF SEQ ID NOS: 4
 24 <170> SOFTWARE: PatentIn Ver. 2.0
 26 <210> SEQ ID NO: 1
 27 <211> LENGTH: 1650
 28 <212> TYPE: DNA
 29 <213> ORGANISM: Artificial Sequence
 31 <220> FEATURE:
 32 <223> OTHER INFORMATION: Description of Artificial Sequence: rabies virus strain ERA
 34 <400> SEQUENCE: 1
 35 aggaaagatg gttcctcagg ctctcctggt tgtacccctt ctggtttttc cattgtgttt 60
 36 tgggaaattc cctattttaca cgatactaga caagcttggt ccctggagcc cgattgacat 120
 37 acatcacctc agctgcccaa acaatttggt agtggaggac gaaggatgca ccaacctgtc 180
 38 agggttctcc tacatggaac ttaaagtgtg atacatctta gccataaaaa tgaacgggtt 240
 39 cacttgacac ggcgttgtga cggaggctga aacctacact aacttcgttg gttatgtcac 300
 40 aaccacgttc aaaagaaagc atttccgccc aacaccagat gcatgtagag ccgcgtacaa 360
 41 ctggaagatg gccggtgacc ccagatatga agagtctcta cacaatccgt accctgacta 420
 42 ccgctggctt cgaactgtaa aaaccaccaa ggagtctctc gttatcatat ctccaagtgt 480
 43 agcagatttg gacccatatg acagatccct tcaactcgagg gtcttcctta gcgggaagtg 540
 44 ctccaggagta gcggtgtctt ctacctaactg ctccactaac cacgattaca ccatttggtat 600
 45 gcccgagaat ccgagactag ggatgtcttg tgacattttt accaatagta gagggaagag 660
 46 agcatccaaa gggagtgaga cttgcggctt tgtagatgaa agaggcctat ataagtcttt 720
 47 aaaaggagca tgcaaaactca agttatgttg agttctagga cttagactta tggatggaac 780
 48 atgggtcgcg atgcaaacat caaatgaaac caaatggtgc cctcccgatc agttggtgaa 840
 49 cctgcaacag tttcgtctag acgaaattga gcacctgtt gtagaggagt tggtcaggaa 900
 50 gagagaggag tgtctggatg cactagagtc catcatgaca accaagtcag tgagtttcag 960
 51 acgtctcagt catttaagaa aacttgctcc tgggttttga aaagcatata ccatattcaa 1020
 52 caagaccttg atggaagccg atgctcacta caagtcagtc agaacttga atgagatcct 1080
 53 cccttcaaaa ggggtgttta gagttggggg gaggtgtcat cctcatgtga acggggtgtt 1140
 54 tttcaatggt ataataatag gacctgacgg caatgtctta atcccagaga tgcaatcatc 1200
 55 cctcctccag caacatatgg agttgttga atcctcggtt atcccccttg tgcacccctt 1260

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/701,014

DATE: 03/05/2002

TIME: 14:12:21

Input Set : A:\sequence list.txt

Output Set: N:\CRF3\03052002\I701014.raw

```

56 ggcagaccgc tctaccgttt tcaaggacgg tgacgaggct gaggattttg ttgaagttca 1320
57 ccttcccgat gtgcacaatc aggtctcagg agttgacttg ggtctcccga actgggggaa 1380
58 gtatgtatta ctgagtgcag gggccctgac tgccttgatg ttgataattt tcctgatgac 1440
59 atgttgtaga agagtcaatc gatcagaacc tacgcaacac aatctcagag ggacagggag 1500
60 ggaggtgtca gtcactcccc aaagcgggaa gatcatatct tcatgggaat cacacaagag 1560
61 tgggggtgag accagactgt gaggactggc cgtcctttca acgatccaag tcctgaagat 1620
62 cacctcccct tgggggggttc tttttaaaaa 1650
64 <210> SEQ ID NO: 2
65 <211> LENGTH: 524
66 <212> TYPE: PRT
67 <213> ORGANISM: Artificial Sequence
69 <220> FEATURE:
70 <223> OTHER INFORMATION: Description of Artificial Sequence: rabies virus strain ERA
72 <400> SEQUENCE: 2
73 Met Val Pro Gln Ala Leu Leu Phe Val Pro Leu Leu Val Phe Pro Leu
74 1 5 10 15
76 Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Leu Asp Lys Leu Gly Pro
77 20 25 30
79 Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val
80 35 40 45
82 Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu
83 50 55 60
85 Leu Lys Val Gly Tyr Ile Leu Ala Ile Lys Met Asn Gly Phe Thr Cys
86 65 70 75 80
88 Thr Gly Val Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr
89 85 90 95
91 Val Thr Thr Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala
92 100 105 110
94 Cys Arg Ala Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu
95 115 120 125
97 Glu Ser Leu His Asn Pro Tyr Pro Asp Tyr Arg Trp Leu Arg Thr Val
98 130 135 140
100 Lys Thr Thr Lys Glu Ser Leu Val Ile Ile Ser Pro Ser Val Ala Asp
101 145 150 155 160
103 Leu Asp Pro Tyr Asp Arg Ser Leu His Ser Arg Val Phe Pro Ser Gly
104 165 170 175
106 Lys Cys Ser Gly Val Ala Val Ser Ser Thr Tyr Cys Ser Thr Asn His
107 180 185 190
109 Asp Tyr Thr Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Met Ser Cys
110 195 200 205
112 Asp Ile Phe Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Glu
113 210 215 220
115 Thr Cys Gly Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly
116 225 230 235 240
118 Ala Cys Lys Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp
119 245 250 255
121 Gly Thr Trp Val Ala Met Gln Thr Ser Asn Glu Thr Lys Trp Cys Pro
122 260 265 270
124 Pro Asp Gln Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/701,014

DATE: 03/05/2002

TIME: 14:12:21

Input Set : A:\sequence list.txt

Output Set: N:\CRF3\03052002\I701014.raw

09701014

```

125          275          280          285
127 His Leu Val Val Glu Glu Leu Val Arg Lys Arg Glu Glu Cys Leu Asp
128          290          295          300
130 Ala Leu Glu Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu
131 305          310          315          320
133 Ser His Leu Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile
134          325          330          335
136 Phe Asn Lys Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg
137          340          345          350
139 Thr Trp Asn Glu Ile Leu Pro Ser Lys Gly Cys Leu Arg Val Gly Gly
140          355          360          365
142 Arg Cys His Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu
143          370          375          380
145 Gly Pro Asp Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu
146 385          390          395          400
148 Gln Gln His Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Val His
149          405          410          415
151 Pro Leu Ala Asp Pro Ser Thr Val Phe Lys Asp Gly Asp Glu Ala Glu
152          420          425          430
154 Asp Phe Val Glu Val His Leu Pro Asp Val His Asn Gln Val Ser Gly
155          435          440          445
157 Val Asp Leu Gly Leu Pro Asn Trp Gly Lys Tyr Val Leu Leu Ser Ala
158          450          455          460
160 Gly Ala Leu Thr Ala Leu Met Leu Ile Ile Phe Leu Met Thr Cys Cys
161 465          470          475          480
163 Arg Arg Val Asn Arg Ser Glu Pro Thr Gln His Asn Leu Arg Gly Thr
164          485          490          495
166 Gly Arg Glu Val Ser Val Thr Pro Gln Ser Gly Lys Ile Ile Ser Ser
167          500          505          510
169 Trp Glu Ser His Lys Ser Gly Gly Glu Thr Arg Leu
170          515          520
173 <210> SEQ ID NO: 3
174 <211> LENGTH: 44
175 <212> TYPE: DNA
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
181 <400> SEQUENCE: 3
182 gatgctcact acaagtcagt ccagacttgg aatgagatcc tccc 44
184 <210> SEQ ID NO: 4
185 <211> LENGTH: 44
186 <212> TYPE: DNA
187 <213> ORGANISM: Artificial Sequence
189 <220> FEATURE:
190 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
192 <400> SEQUENCE: 4
193 gggaggatct cattccaagt ctggactgac ttgtagtgag catc 44

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/701,014

DATE: 03/05/2002

TIME: 14:12:22

Input Set : A:\sequence list.txt

Output Set: N:\CRF3\03052002\I701014.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date

03052002\I701014